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Alexithymia in relation to alcohol expectancies in alcohol-dependent outpatients

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Abstract

Alexithymia and alcohol outcome expectancies were investigated in 355 alcohol-dependent treatment seekers. Patients with alexithymia gave stronger self-report ratings of expectancies of affective change related to beliefs that alcohol leads to negative mood states and assertion, that alcohol enhances social skills, compared to those without alexithymia. The findings suggest that alcohol-dependent outpatients with alexithymia may drink to experience intensified negative emotions and improved social functioning.

Keywords: Alcohol dependence, alexithymia, alcohol expectancies

1. Introduction

45-67% of individuals with alcohol dependence report alexithymia (Thorberg et al., 2009), a personality trait characterised by difficulty identifying and describing feelings, difficulty distinguishing between feelings and the bodily sensations of emotional arousal, deficits in fantasy life and an externally oriented thinking style (Nemiah et al., 1976; Taylor and Bagby, 2000). Those with combined alexithymia and alcohol dependence report stronger craving, earlier onset of drinking, lower mental and physical quality of life and higher suicidal ideation as well as insecure attachment compared to those without alexithymia (Uzun et al., 2003; Sakuraba et al., 2005; Evren et al., 2010; Thorberg et al., 2011ab). Given that alexithymia may have the potential to interfere with treatment outcomes (Thorberg et al., 2009), it is essential to clarify the relationship between alexithymia and key factors associated with problematic drinking.

Following operant principles, individuals with positive expectations regarding the consequences of drinking (alcohol expectancies; AE) drink more and are more likely to misuse alcohol (Young and Oei, 1996; 2000), than those with negative expectancies. Consequently, expectancy challenge is a core component of successful treatment (Goldman et al., 1987) and changes in AE over a 12-week cognitive behavioural treatment program were predictive of treatment success (Young et al., 2011). Three different types of AE were assessed in this study as these expectancies are specifically related to emotional functioning;

affective change (the belief that alcohol leads to negative mood states), assertion (that alcohol enhances social skills) and tension reduction (that alcohol may relieve tension).

How AEs differ between alcohol-dependent individuals with and without alexithymia or across genders has not yet been explored. However, higher levels of difficulty describing feelings and externally oriented thinking were found among alcohol-dependent males compared to females (Thorberg et al., 2012). Furthermore, social drinkers with alexithymia are more likely to report expectations of affective change than those without alexithymia (Lyvers, et al., 2014), perhaps indicating that people with alexithymia drink to enhance emotional experiences. A possible mechanism contributing to problems in those with combined alexithymia and alcohol-dependence may be the expectancy to experience intensified negative emotions and improve social functioning, and this may be addressed in treatment. The objectives of the present study were to examine AE across alexithymia groups (have alexithymia, borderline alexithymia and no alexithymia) among male and female alcohol-dependent outpatients.

2. Methods

2.1. Participants

Three hundred and fifty five patients (244 males and 111 females; mean age 38.67 years, *SD*=10.95) fulfilling clinically assessed *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* criteria for alcohol dependence were recruited from an outpatient cognitive behavioural treatment program. All participants scored 20 or higher (*M*=28.32, *SD*=6.84) on the Alcohol Use Disorders Identification Test (AUDIT) indicating dependent drinking (Babor et al., 2001). The time between the last drink and the assessment was in the range of 4-14 days. 57.7 % reported daily drinking, 16.1% were binge drinkers and 16.3% drank at least twice a week. This variable had 9.6% missing data. With respect to education

level 13.2% reported having a university degree, 3.7% a diploma, 4.5% a certificate, 33% had completed year 12, 36.6% year 10, 6.8% commenced primary school and 2% did not state education level. In terms of work status 1.7% reported a full-time job, 51% part-time job, 4.5% study, 18.3% unemployment, 4.5% home duties and 19.7% did not report work status. Subject relationship status: 38.3% were in a de facto relationship or married, 34.9 % had never been married, 24.5% were separated or divorced and 1.3% widowed. Exclusion criteria included a co-morbid psychiatric disorder, organic brain syndrome or heavy sedation.

2.2. Measures

2.2.1. Toronto Alexithymia Scale (TAS-20)

The TAS-20 is a 20 item self-report questionnaire, which assesses a total alexithymia score, Difficulty Identifying Feelings (DIF), Difficulty Describing Feelings (DDF) and Externally Oriented Thinking (EOT) (Bagby et al., 1994). Individuals are classified as having alexithymia if their total score exceed >61, borderline alexithymia if between 52-60, and no alexithymia if <51. The TAS-20 has acceptable validity and reliability (Bagby et al., 1994; Thorberg et al., 2010). Cronbach alphas for the TAS-20 total, DIF, DDF and EOT were 0.84, 0.83, 0.76 and 0.61 in the current study.

2.2.2. Drinking Expectancy Questionnaire (DEQ)

The DEQ is a 43 item self-report scale that measures beliefs, emotions and thoughts associated with drinking. This study examined three DEQ factors, Affective Change, e.g., "Drinking makes me bad tempered"; Assertion, e.g., "Drinking makes me feel outgoing and friendly" and Tension Reduction, e.g., "I drink to relieve tension." as these expectancies are specifically related to emotional functioning. The DEQ has sound psychometric properties

(Young and Oei, 1995, 1996). In this study, the Cronbach alphas for the Affective Change, Assertion and Tension Reduction scales were 0.86, 0.78 and 0.60, respectively.

2.3. Procedure

Ethics approval was granted by institutional ethics committees. Measures were administered before the first treatment session to avoid the confounding effects of therapy.

3. Results

Intercorrelations of the TAS-20 and DEQ scales are shown in Table 1. A two-way multivariate analysis of variance (MANOVA) was conducted with the independent variables of alexithymia group (have alexithymia, n=116; borderline alexithymia, n=94; no alexithymia, n=145) and gender and the dependent variables of DEQ expectancy scores (Affective Change, Assertion, Tension Reduction). The overall MANOVA was significant for group according to Wilks Lambda =0.90, $F(6, 694)=6.01$, $p< 0.0001$ and gender =0.98, $F(3, 347)=2.97$, $p< 0.05$. Univariate effects were significant for DEQ expectancy scores: Affective Change, $F(2, 349)=10.40$, $p< 0.0001$; and Assertion, $F(2, 349)=10.27$, $p< 0.0001$. The univariate effect of gender on Tension Reduction was also significant, $F(1, 350)=7.51$, $p< 0.01$ with females (M=15.81, SD=2.96) scoring significantly higher on DEQ-Tension Reduction expectancies than males (M=14.87, SD=3.03), $p< 0.05$.

According to Tukey post-hoc test, those with alexithymia (M=36.59, SD=7.96) and borderline alexithymia (M=35.41, SD=8.40) scored significantly higher on DEQ-Affective Change expectancies than those without alexithymia (M=30.86, SD=9.02), $P< 0.0001$; and those with alexithymia scored significantly higher on DEQ-Assertion expectancies (M=39.29, SD=5.67) than those with borderline alexithymia (M=37.31, SD=5.13), $p< 0.05$, and no alexithymia (M=35.43, SD=6.74), $p< 0.0001$.

Furthermore, a two way MANOVA was conducted with the independent variables of alexithymia group and the dependent variables of TAS-20 scores (TAS-total, DIF, DDF, EOT). The overall MANOVA was significant for group, $F(6, 700)=155.30$, $p<.0001$. Univariate effects were significant for TAS-total, $F(2, 352)=766.48$, $p< 0.001$; DIF, $F(2, 352)=217.20$, $p<0.0001$; DDF, $F(2, 352)=293.91$, $p< 0.0001$; and EOT, $F(2, 352)=88.67$, $p< 0.001$. According to Tukey post-hoc test all group differences were significant (see Table 1).

4. Discussion

Alexithymia was associated with stronger affective change expectancies among alcohol-dependent outpatients with alexithymia compared to those without alexithymia as found in social drinkers by Lyvers et al. (2014). Drinking alcohol may increase insight, or access to, emotional states and cognitions among those with alexithymia and alcohol-dependence making alcohol particularly reinforcing for this group (Thorberg et al., 2009). Blindfeel theory proposes that alexithymia is characterised by an impoverished conscious experience of emotions triggered by an environmental event, which is associated with a deficit in the anterior cingulate cortex (Lane et al., 1997). Intoxication may temporarily reduce this emotional processing dysfunction in those with alexithymia and alcohol-dependence enhancing their ability to access their feelings. Although previous neurobiological research has supported the 'blindfeel hypothesis' (e.g., Kano et al., 2003), such studies have been undertaken among young healthy adults. Neurobiological research exploring whether there are potential differences in brain activation during intoxication among alcohol-dependent individuals with and without alexithymia is needed.

This study also found that alcohol-dependent outpatients with alexithymia scored significantly higher on assertion expectancies compared to those with borderline and no alexithymia. Thus, drinking alcohol may also help those with alexithymia buffer social

awkwardness and improve social functioning in accordance with the idea that alcohol may be used to facilitate interpersonal contact (Thorberg et al., 2009). This is a plausible explanation as a study by Thorberg and colleagues (2011b) reported anxious attachment and interpersonal difficulties among alcohol-dependent outpatients with alexithymia compared to alcohol-dependent outpatients without alexithymia. With respect to tension reduction expectancies no difference were found across alexithymia groups, yet females scored significantly higher on such expectancies compared to males suggesting that females may not believe that alcohol helps them unwind and reduce their tension.

A limitation of the current study was the design, which did not test the effect of alcohol on relevant measures across patient groups. Given the strong relationship between alexithymia and affective change and assertion expectancies in the present study, targeting such expectancies in the assessment and treatment of alcohol-dependent outpatients with alexithymia may translate into lower rates of alcohol consumption and relapse. Given that previous research has also found significant relationships between dissociation, trauma and alexithymia among those with alcohol dependence (e.g., Craparo et al., 2014), future research may benefit from assessing key factors such as alcohol expectancies and a broader set of factors that may be associated alexithymia in alcohol dependence utilising a longitudinal design.

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Contributors

Authors Thorberg and Young designed this study. Thorberg did the literature searches and identified relevant articles, and wrote the first draft in collaboration with Young. Lyvers, Sullivan, Hasking, London, Tyssen, Connor and Feeney provided feedback during the writing process and made additional changes to the final draft. All authors have contributed and approved the final manuscript.

Conflict of interest

There are none.

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Table 1 Intercorrelations among study variables.

	AC	ASS	TR	Alex	B-Alex	N-Alex
TAS-TS	0.32*	0.33*	0.09	67.72 (5.44)**	55.68 (2.38)	42.99 (5.99)
DIF	0.40*	0.41*	0.22*	25.20 (3.59)**	20.39 (3.58)	14.88 (4.52)
DDF	0.22*	0.26*	0.08	18.65 (2.68)**	14.91 (2.44)	10.47 (2.92)
EOT	0.08	0.07	-0.15*	23.88 (3.63)**	20.37 (3.56)	17.64 (3.99)

* $p < 0.01$; ** $p < 0.0001$. AC=Affective Change, Alex=Have alexithymia, ASS=Assertion, B-Alex=Borderline alexithymia, DDF=Difficulty Describing Feelings, DIF=Difficulty Identifying Feelings, EOT=Externally Oriented Thinking, N-Alex=No alexithymia, TAS-TS=Toronto Alexithymia Scale-Total Score, TR=Tension Reduction

Highlights

- Alcohol-dependent alexithymic outpatients reported stronger affective change expectancies compared to non-alexithymics.
- Alexithymic outpatients scored significantly higher on assertion expectancies compared to borderline and non-alexithymics alcohol-dependent outpatients.
- Targeting alcohol expectancies in the assessment and treatment of alcohol-dependent alexithymics may improve treatment outcomes.